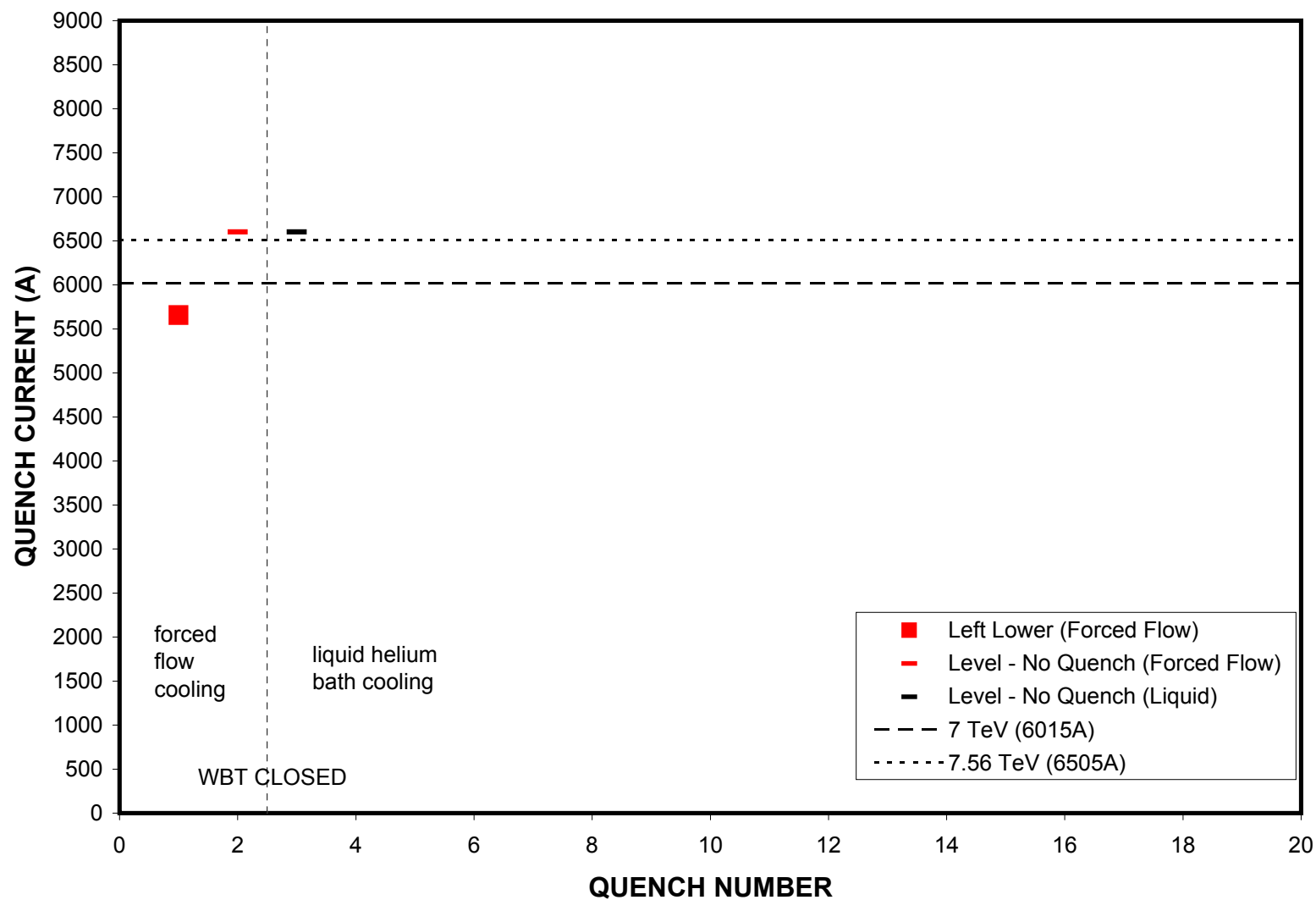


D4L103 QUENCH TESTS



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D4L103 QUENCH SUMMARY

Magcool Bay C

QUENCH #	RUN #	CURRENT (A)	T1 (K)	T3 (K)	START (ms)	MIITS	COIL	COMMENTS
T = 4.5K (nom)								
Warm bore tubes installed, sealed, and under vacuum								
Forced flow cooling @ 12atm								
1	21	5656	4.646	5.258	-60	9.3	lower left	(h)
	22	6600	4.577	5.140	ramp to 6600A; no quench			
	23	6600	4.507	5.106	ramp to and 20min at 6600A; no quench			
Warm bore tubes open								
Magnetic field measurements to 6400A with no quenches								
Switched to liquid helium bath cooling @ 1.4atm								
Warm bore tubes sealed and under vacuum								
	61	6600	4.597	4.578	ramp to 6600A; no quench			(i)

Notes:

- Ramp rate for quenches was 20A/s with a stop at 5000A.
- Energy extraction used: 35mohms for all quenches.
- The temperature T1 is a diode sensor located in the helium return line tube which contains the superconducting bus; T3 is in the lower lead interconnect pot. Both have associated redundant sensors.
- There were no auxiliary voltage taps in the magnet coils.
- Data acquisition sampling rate was 1kHz for all quenches.
- Strip heaters were fired at 475V (nom) and 96A (nom), with 1ms delay.
- For all quenches, the voltage difference quench detector threshold voltage was set at 0.6V.
- For quench #1, many voltage spikes are present in the baseline prior to, and some after, quench start.
- After reaching 6600A without quench while cooling with liquid helium, a strip heater quench was done at 5000A, and correct operation of the level probes was verified.